Life Sciences

User Guide

Sentino® Filter Dispenser

Product Number: 13184

Filtration. Separation. Solution.SM

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Introduction

Application and Intended Use

The Membrane Filter (MF) Technique is a method of analyzing aqueous samples for microbial contamination. A fluid sample is pulled through a membrane filter and the filter is placed on growth media and incubated. After the prescribed incubation period, colonies are counted and reviewed for appropriate morphology.

Pall Life Sciences' Sentino Filter Dispenser is designed to aseptically dispense a single disc of membrane at the press of a button. The membrane can easily be transferred using forceps onto a platform to be used in MF Technique. As the membrane is dispensed, the packaging materials neatly wind onto spools for disposal when the end of the pack is reached. The dispenser's small foot print is designed to take up less bench top space and the small membrane refill pack results in less packaging for disposal.

The Sentino Filter Dispenser is designed for laboratory use only and should not be used in a manner other than indicated.

Ordering Information

Sentino Filter Dispenser

Part Number	Description
13184	(1) Power Transformer (1) European power cord with CEE 7/7 plug (1) UK power cord with BS1363 plug (1) NA power cord with NEMA 5-15P (1) User Guide CD

Accessories - Dispenser Pack efills

Part Number	Description	Pkg
68123	0.2 µm, Supor® membrane	1000/pkg
68121	0.45 µm, GN-6 Metricel® membrane	1000/pkg
68124	0.45 µm, Metricel Black membrane	1000/pkg
68125	0.8 µm, Metricel Black membrane	1000/pkg

Product Terminology

Keypad

1. Main power indicator
2. Membrane dispense button
3. Battery status indicator
4. Battery charge indicators

Body

5. Upper spool with retainer clip (slides horizontally off spool as shown)
   a. Retention groove
   b. Retainer clip pin
   c. Retainer clip knob
6. Positioning sensor
7. Guide plates
8. Upright support
9. Lower spool with retainer clip
10. Refill pack holder
11. Power entry socket (located on back of the unit)
12. Product identification label

Power

13. Transformer power entry plug
14. Transformer input interface
15. Power cord(EU, UK and NA plugs are included in each instrument.)

Symbols Referenced

See manual for instructions.

The Sentino Filter Dispenser, a product of Pall Corporation, is in conformity with the requirements of the European Directive 2004/108/EC and associated amendments with regards to Electromagnetic Compatibility, and the European Directive 2006/42/EC and associated amendments with regards to Machinery. (See EC Declaration of Conformity section.)

Reuse, recycling, recovery, and disposal instruction.

Safety Precautions

To protect personal safety and ensure correct use of this equipment, be sure you read and understand this guide before use.

The following terms are used:

DANGER

To designate a condition which MAY involve mortal danger or serious injury.

CAUTION

To designate a condition which MAY involve serious injury or destruction of the equipment involved.

NOTE

To designate useful information to improve performance or a condition which MAY involve faulty operation of the equipment, thus causing poor performance.

Universal Precautions

Appropriate care should always be taken when using electrical equipment around aqueous solutions in the laboratory.

Opening or disassembly of product enclosure may involve electrical shock. Only authorized personnel should disassemble product.

Do not immerse.

Only use parts approved by the manufacturer.

For laboratory use only.

Keypad buttons on this product intended for finger touch only.

Only use recommended solutions for cleaning/sanitization.

Return product in original packaging for warranty repair. Warranty valid only when used in accordance with this User Guide.

Keypad and Symbols

MAIN POWER INDICATOR

A green LED will illuminate when the dispenser is plugged into the power transformer and VAC power source. This LED will not be illuminated when operating on battery power.

DISPENSE BUTTON

Press the dispense button to dispense a single disc of membrane.

BATTERY STATUS INDICATOR

When plugged into the power transformer and VAC power source, this symbol will indicate the battery is charging by an illuminated blue LED. When the battery is fully charged, the blue LED will turn off.

BATTERY CHARGE INDICATOR

When operating on battery power, three blue LED lights will illuminate to indicate the relative level of battery charge when the dispense button is pressed.

- *All three LEDs will illuminate after pressing the Dispense Button when the battery is fully charged or near full charge.*
- *Two LEDs will illuminated after pressing the Dispense Button when the battery is partially charged.*
- *One LED will illuminate after pressing the Dispense Button when the battery power is low and the dispenser should be placed on charge before further use.*

Note: The dispenser can be operated on main power as the battery recharges.

Operation

Save original packaging for service and warranty repairs.

Device Set-Up

Connecting Power Supply and Charging

1. Position the Sentino Filter Dispenser on a laboratory bench.
2. Attach power entry plug from power transformer into the power socket. Connect power cord to the input interface on the power transformer, then plug power cord into appropriate electrical outlet having 100-240 VAC supply.
3. Confirm Main Power Indicator is illuminated and Battery Status Indicator is illuminated blue to indicate battery is charging.
4. Operation of the dispenser is optimal when used on battery power however unit can be used while plugged into main power.
5. Charging instructions for use on battery charge:
   a. Fully charge dispenser before first use.
   b. After charging, use the dispenser on battery power for the work day. During use, monitor the Battery Charge Indicator. As the battery depletes, the number of blue LEDs illuminated will decrease from 3 to 2 to 1. When the Battery Charge Indicator reaches one LED illuminated, place the unit on charge.

      NOTE: The dispenser can be operated on main power as the battery recharges.

   c. After each use, place the dispenser back on charge.
   d. If the dispenser is not used on a regular basis, leave the unit charging or charge at least once a week.

Filter Refill Pack Installation

The Sentino Filter Dispenser is designed to accommodate Pall dispenser refill packs.

Loading

1. Remove lid flaps of the membrane refill box. Remove U-shaped cut-out for viewing end of pack when loaded in the dispenser.

2. Slide box into recessed holder on the dispenser with the product label facing left and the U-shaped cut-out facing right. The refill web should now be aligned such that the clear film is facing up as the web feeds into the dispenser and the rectangular cut-outs are on the left closest to the up-right support.
3. To minimize the length of web required for loading, use knobs on retainer clips to adjust upper spool with a retention groove at the 2 o'clock position and lower spool with a retention groove at the 4 o'clock position.

4. Remove retainer clips from upper and lower spools.
5. Insert the fan folded media between the membrane guide plates as shown and pull 1½ filters between the guide plates.

6. Separate the film layer from the paper layer, wrap the clear film in a counter clockwise direction over the retention groove positioned at the 2 o'clock position.

Each refill pack has two extra discs for loading the dispenser. Discard the two discs exposed during loading.

7. Replace the upper retainer clip and secure the film by catching the end of the film between one pin of the retainer clip and the retention groove on the spool.

To avoid jamming, it is only necessary to capture the film with one side of the retention clip.

8. Repeat with the paper and lower spool but wrap the paper layer in a clockwise direction.
9. Adjust any slack in the refill web by manually turning the spools using the retainer clip knobs.

Do not press the membrane dispense button until ready to use the filter.

10. Press membrane dispense button to dispense a single disc of membrane.

At any point at idle operation, the retainer knobs can be used to adjust the tension of the refill web on the spools.

Troubleshooting

Problem	Cause	Corrective Action
Plugged into main power source and green main power indicator not illuminated.	Incorrect power transformer.	Use power transformer supplied with dispenser.
	Incorrect power source.	Check that power source supplies 100-240 VAC.
	Poor connections.	Check that all connections are securely pushed together.
Plugged into main power source but blue battery status indicator not illuminated.	Incorrect power transformer.	Use power transformer supplied with dispenser.
	Incorrect power source.	Check that power source supplies 100-240 VAC.
	Poor connections.	Check that all connections are securely pushed together.
	Battery is fully charged.	Battery status indicator will extinguish when the battery is fully charged. Unplug from main power and press membrane dispense button to check battery charge indicators.
Plugged into main power source, blue battery status indicator not illuminated, only left most battery charge indicator LED illuminated blue.	Battery failing to charge	Contact Pall Technical Service (see Service section)
Battery charge indicator lights not illuminating.	Plugged into main power source.	Unplug from main power and check for illumination when dispenser button is pushed.
Not dispensing a disc of membrane or spools are barely rotating.	Battery discharged.	Continue using power transformer plugged into AC mains power until battery is fully charged.
Dispensing two discs at a time.	Obstruction in positioning sensor.	Verify dispenser refill pack is loaded properly with rectangular cut-outs on the left (see Preparing System for Use section). Tear off web at perforation and reload per instructions.
		Use compressed air to remove dust from the positioning sensor.
Spools are not rotating.	Obstruction in one or more spool.	Check that spools are free of foreign objects.
		Verify dispenser refill pack is loaded properly (see Preparing System for Use section). Tear off web at perforation and reload per instructions.
		Check that spools allow adjustment in both directions using retainer clip knobs to gently rotate the spools. If they do not, contact Pall Technical Service (see Service section).
Films not tracking properly on the spool.	Initial load not aligned properly.	Verify dispenser refill pack is loaded properly (see Preparing System for Use section). Tear off web at perforation and reload per instructions.

If the above corrective actions do not remedy the problem, contact Pall Technical Service (see Service section).

Maintenance

Do not immerse.

The dispenser is designed only for use with Pall membrane refill packs.

*Visit **www.pall.com/sentino** for video on system preparation and operation.*

Cleaning Body and Plates

- Surfaces may be wiped down with a towel moderately soaked in the following common laboratory sanitizing solutions:
  - 70% isopropyl alcohol (IPA)
  - 10% bleach

Clearing Positioning Sensor

- Use compressed air to blow dust from the positioning sensor.

Service

Save original packaging for service and warranty repairs.

Pall does not recommend any service be performed on this device other than by the manufacturer.

Contact Pall Life Sciences for technical support, warranty, and service inquiries at 800.521.1520 (inside USA and Canada or LabCustomerSupport@pall.com.

Specifications

Materials of Construction
Housing Material: Polycarbonate ABS-blended polymer
Keypad and Label: Polyester
Bottom Plate: Anodized aluminum
Upright: Anodized aluminum
Spools: Anodized aluminum
Guide Plates: Anodized aluminum
Retainer Clips: Stainless steel with anodized aluminum knobs
Box Retainer: Stainless steel
Foot Pads: Rubber

Dimensions
Length: 22.0 cm (8.7 in.)
Width: 12.0 cm (4.7 in.)
Height: 20.0 cm (7.9 in.)
Weight: 0.9 kg (2.0 lbs.)

Temperature Range
Operation: 15-30 °C (59-86 °F)
Storage: -10-35 °C (14-95 °F)

Battery
Voltage: 12.0 V
Type: NiMH (nickel metal hydride)

DC Supply
Voltage: 24.0 V

AC/DC Power Transformer
24 VDC 1.6 Amp 100-240 VAC, 47-63 Hz
Input Interface: IEC 320 C8-pin socket
Output Interface (Power Entry Plug): 2.5 mm barrel jack

Power Cord
C7 connector and NEMA 5-15P grounded plug
C7 connector and European CEE 7/7 plug, C7 connector and UK BS1363 plug

Disposal Instructions

Reuse, recycling, recovery and disposal instruction. The materials used in this unit are RoHS compliant. The presence of this label on a product means that the product contains electrical or electronic materials; and, therefore, it should not be disposed of as unsorted waste but instead be treated separately. The presence of these materials may, if not disposed of properly, have potential adverse effects on the environment and human health. Within the European Union, users are urged to recycle such products when being replaced with a newer version or when they have outlived their useful lives. However, as the legislation and facilities vary throughout the member states, please visit **www.pall.com/weee** to arrange for proper disposal of used equipment.

EC Declaration of Conformity

CE

Product Description: **Sentino® Membrane Dispenser**
Product Part Number: **13184**

The **Sentino® Membrane Dispenser**, a product of Pall Corporation, is in conformity with the requirements of the European Directive 2006/42/EC and associated amendments with regards to Machinery, the European Directive 2004/108/EC and associated amendments with regards to Electromagnetic Compatibility, and the European Directive 2006/95/EEC and associated amendments with regards to Low Voltage safety and the restriction of the use of Hazardous Substances (RoHS) Directive 2011/65/EU.

This declaration is based upon testing the compliance of the product against the limits of the following harmonized standards:

Emissions and Immunity:
EN 61326:2013 Electrical equipment for monitoring, control and laboratory use – EMC requirements – Part 1: General requirements

and assessing the compliance of the product to these harmonized standards:

EN 61010-1: 2010 Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory use
EN 60204-1: 2006 Safety of Machinery - Electrical Equipment of Machines - Part 1: General Requirements
EN 12100-1: 2003 Safety of Machinery - Basic Concepts, General Principles for Design - Part 1 Basic Terminology, methodology
EN 12100-2: 2003 Safety of Machinery - Basic Concepts, General Principles for Design - Part 2 Technical principles and specifications

Signed: Date: 21st July, 2014

Dr N. Moss
Director of Instrumentation Technology.

For and on behalf of:
Pall Europe Limited, 5 Harbourgate Business Park, Portsmouth, England, PO6 4BQ

General Limited Warranty

Warranty, Limitation of Liability, and Remedies

1. There is no warranty of merchantability or fitness for any particular purpose with respect to any of the products, nor is there any other warranty expressed or implied, except as provided for herein.
2. For a period of 12 months from the date of delivery from Seller (the “Warranty Period”), Seller warrants that products manufactured by Seller, when properly installed and maintained, and operated at ratings, specifications, and design conditions, will be free from defects in material and workmanship.
3. Seller’s liability under any warranty is limited solely (in Seller’s discretion) to replacing (F.O.B. original ship point), repairing, or issuing credit for products which become defective during the Warranty Period. Purchaser shall notify Seller promptly in writing of any claims and provide Seller with an opportunity to inspect and test the product claimed to be defective.

   Buyer shall provide Seller with a copy of the original invoice for the product, and prepay all freight charges to return any products to Seller’s factory, or other facility designated by Seller. All claims must be accompanied by full particulars, including system operating conditions, if applicable.
4. In no event shall Seller be liable for any product altered outside of the Seller’s factory by someone other than Seller or for a product subjected to misuse, abuse, improper installation, application, operation, maintenance or repair, alteration, accident or negligence in use, storage, transportation, or handling.
5. In no event will Seller be liable for any damages, incidental, consequential or otherwise, whether arising out of or in connection with the manufacture, packaging, delivery, storage, use, misuse, or non-use of any of its products or any other cause whatsoever.

Pall Standard Terms and Conditions apply to the purchases of all Pall products and services, which Terms and Conditions for each region can be found at www.pall.com under the tab "Find Products/Terms and Conditions of Sale," or obtained by written request to the local Pall office for your region.

PALL Life Sciences

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